

Hydraulic and Pneumatic

USSR

UDC 532.516

TSEPILEVICH, V. G., UDLER, E. I., MISHCHENKO, L. A.

"Hydrodynamic Boundary Layer at an Enclosed Oscillating Flane"

Sb. nauch. tr. Tomsk. inzh.-stroit. in-t (Collection of Scientific Works of Tomsk Structural Engineering Institute), 1971, Vol. 17, pp 116-124 (from RZh-Mekhanika, No 3, Mar 72, Abstract No 3B673)

Translation: The second Stokes problem on the motion of a viscous liquid close to an unbounded plane wall and making rectilinear harmonic oscillations in its plane is extended to the case when another plane wall makes harmonic oscillations of a different frequency than amplitude not coinciding in phase in a parallel plane at a certain distance. The solution of the Navier-Stokes equation for a layer of viscous liquid between the oscillating plane walls is sought by the Fourier method. It is shown that the presence of a parallel plane surrounding the flow does not change the phase shift in comparison with the case of an unenclosed flow; however the velocity attenuates across the cross section more intensively, especially when the parallel plane walls oscillate in counter-phase. Ya. S. Khodorkovskiy.

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TSEPKOV, G. V.

112. USSR

UDC 612.84/.88 : 519.92+612.815

COLEEN

DOLYATOVSKIY, V. A., PONOMAREVA, I. D., and TSEPKOV, G. V.

S6: FOREIGN PRESS DIGEST

29 OCT 1971

"An Analysis of the Structural and Functional Organization of Sensory Systems"

Kiberneticheskiye Aspekty v Izuchenii Raboty Mozga (Cybernetic Aspects of the Study of the Brain's Functioning), Moscow, Nauka Publishing House, 1970, pp 145-158

Abstract: The basic principles of modeling sensory systems are considered. Quantitative appraisals of the organization and information capabilities of sections of the analyzers are proposed. The basic information characteristics of sections of the visual and auditory analyzers are calculated. The changes that occur in the structure of the synaptic connections of neurons in various sections of an analyzer, the quantitative elements in the sections, and the changes that occur in the frequency of the rhythm of neurons in proportion to ascending analysis are all analyzed. A method of calculating the number of layers of neuron structures and the degree of contraction of the receptive zones of neurons is suggested. The appraisals suggested may be applied to the study of the characteristics of sensory systems.

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USSR

UDC: 681.2/325

KILIMNIK, I. I., LEZOV, A. P., SAZONOV, I. A., TSEPLYAYEV, K. N., and SILU-

YANOV, V. A.

(D)

"Specialized Digital Measuring Unit"

Tr. Mosk. energ. in-ta (Works of the Moscow Power Engineering Institute),
1972, vyp.154, pp 133-138 (from RZh-32. Metrologiya i Izmeritel'naya Tekhnika,
No 5, 1973, Abstract No 5.32.60)

Translation: The authors present a short description and the technical characteristics of a digital unit developed by the Department of Information-Measurement Technology of the Moscow Power Engineering Institute for the remote control study of high-speed processes. This unit in some ways satisfies current requirements. The unit consists of three blocks: analog-digital converter, a remote block, and a matching block. The analog-digital converter and the remote block are connected by a cable communication line 250-500m long. The following are the basic technical data of the digital remote control unit model: nominal value of the input voltage U_{nom} , ±100mV; fundamental error of the measurement result at the most sensitive limit does not exceed $\pm(0.05-0.025 \frac{U_{nom}}{U_x})$ percent; maximum sensitivity is not less than 1/2

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KILIMNIK, I. I., et al., Tr. Mosk. energ. in-ta, 1972, vyp. 15⁴, pp 133-138

(1)

40 microvolts; with the following input resistance: a) not less than 100 kilohms under conditions of compensation; b) not less than 50 kilohms in the equilibration process; 50, 100, 200, 400, 1000 measurement frequency; power consumed from a 220v network does not exceed 30w; unit dimensions: a) the analog-digital converter - 220 x 400 x 250 mm, b) the remote block - 180 x 270 x 170 mm, c) matching block - 180 x 200 x 180 mm. Original article: two illustrations and one bibliographic entry.

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Transformation and Structure

USSR

UDC: 546.3-19 + 546.56 + 546.681

SKYARENKO, I.YA., PRISELKOV, YU.A., ZIMAKOV, I.YE., MATERN, G., SAPOZHNIKOV, YU.A., TSEPLYAYEVA, A.V., and SPITSYN, V.I., Institute of Physical Chemistry, Moscow Academy of Sciences USSR, and Moscow State University imeni M. V. Lomonosov, Moscow Ministry of Higher and Secondary Specialized Education USSR

"Evaporation of the Copper-Gallium Alloy in the Field of Phase Transformations"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, Vol 4, Apr 70, pp 757-761

Abstract: Partial vapor pressures of copper and gallium were determined over copper-gallium (15.5 at-%) alloy in the temperature interval 1171-1395°K. Experimental data plotted as $\log p$ vs the inverse temperature show that the functions are not linear, but complex curves with many extrema, exceeding considerably any possible experimental error. The partial pressure curve of gallium exhibited such anomalies much more than did copper and they appeared in liquid, heterogeneous, and solid phases. In the fusion process the partial pressure of copper vapor was noticed to drop. Contrary to some reported data, radioactivity did not affect markedly the behavior of copper vapor, except that the rate of the drop in partial pressure of copper vapor was increased. On the basis of differential-thermal analysis, phase conversions were determined to take place at: 1256 \pm 3°K, 1196 \pm 3°K, 1299 \pm 3°K, and 1236 \pm 3°K. The authors thank N.G. Savostina for participating in the research.

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USSR

UDC 53.083:513.84

TSERELOV, R. A.

"Determination of the Spatial Configuration of a Measured Physical Parameter by the Solution Method of Boundary Problems"

Moscow, Metrologiya, No 3, 1972, pp 3-7

Abstract: Solutions of problems of mathematical physics and the measuring technique are applied in the synthesis of the spatial configuration and the determination of physical parameters in points inaccessible for making measurements by reducing these problems to a superposition of fields of point sources. By the method of electrostatic representations, in which the induced field is introduced as a field of charges located outside the investigated region and selected according to given boundary conditions, the Green's function was plotted for two cases. The first case is an internal boundary problem for potential fields (elec-

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USSR

TSERELOV, R. A., Metrologiya, No 3, 1972, pp 3-7

trostatic, magnetostatic, temperature, and the like) in the region between eccentric spheres, when a sphere S_1 completely includes a sphere S_2 . The second case considers an infinite region V outside two conducting grounded spheres S_1 and S_2 . The solutions are found in the form of uniformly convergent series. Two illustr., three formulas, five bibliog. refs.

2/2

- 126 -

172 011
TITLE--ON THE PROCESSES WITH K MESON DOUBLE STRANGE EXCHANGE -U-
UNCLASSIFIED PROCESSING DATE--300CT70

AUTHOR-(03)-LAPIDUS, L.I., TARASOV, A.V., TSEREN, CH.

CCOUNTRY OF INFO--USSR

SOURCE--(JINR P2-5028) LAB. OF NUCLEAR PROBLEMS). 1970. 18P. DEP. CFSTI
DATE PUBLISHED--70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--EXCHANGE REACTION, K MESON, HELIUM ISOTOPE, MESON INTERACTION,
STRANGE PARTICLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/2188

CIRC ACCESSION NO--AT0127552

STEP NO--UR/0000/70/000/000/0018/0018

UNCLASSIFIED

2/2 011

CIRC ACCESSION NO--AT0127552 UNCLASSIFIED PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0 ABSTRACT. THE PROCESS OF DOUBLE STRANGENESS EXCHANGE INTERACTIONS OF KAONS WITH NUCLEI IS DISCUSSED. THE FINAL STATES IN K PRIME NEGATIVE MINUS PRIME4 HE INTERACTIONS ARE PRESENTED WITH PROPER THRESHOLDS AND HYPERNUCLEI WHICH CAN BE PRODUCED. POSSIBLE KAON DOUBLE STRANGE EXCHANGE PROCESSES ON DEUTERONS ARE PRESENTED. THE DEVIATION OF THE CROSS SECTION IS CONSIDERED ON THE GLAUBER APPROXIMATION. ESTIMATES ARE GIVEN FOR THE DOUBLE STRANGENESS EXCHANGE CROSS SECTIONS ON NUCLEONS AND ON DEUTERONS. FACILITY: JOINT INST. FOR NUCLEAR RESEARCH, DUBNA USSR.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--POLARIZATION PHENOMENA DURING ELASTIC SCATTERING OF DEUTERONS IN
THE GLAUBER APPROXIMATION -U-

AUTHOR--TSEREN, CH.

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(2), 382-6

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--DEUTERON SCATTERING, ELASTIC SCATTERING, MESON INTERACTION,
DIFFERENTIAL CROSS SECTION, APPROXIMATION CALCULATION, NEUTRON
POLARIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1031

STEP NO--UR/0357/70/011/002/0382/0386

CIRC ACCESSION NO--AP0110721

UNCLASSIFIED

2/2 015 UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0110721

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLARIZATION EFFECTS IN ELASTIC HIGH ENERGY PI D (KD, ND) ARE CONSIDERED. THE POSSIBILITY IS NOTED OF EXPTL. DECIDING AMONG THE VARIOUS MECHANISMS PROPOSED IN THE LITERATURE TO EXPLAIN THE SO CALLED DIP IN THE DIFFERENTIAL CROSS SECTION CURVE AT T EQUALS T SUB0. FACILITY: OB'EDIN. INST. YAD. ISSLED., DUBAN, USSR.

UNCLASSIFIED

1/2 025

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--LINEAR ORGANOSILICONE COMPOUND OLIGOMERS AND POLYMERS CONTAINING
CARBON FUNCTIONAL TERMINAL GROUPS -U-

AUTHOR--(03)--MAY, L., FISERS, G., TSERETELI, I.YU.

CCOUNTRY OF INFO--USSR

SOURCE--USSR 262,394

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--26JAN70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--CLIGOMER, CHEMICAL PATENT, SILOXANE, POLYMER, HYDROXYL
RADICAL, ORGANOMAGNESIUM COMPOUND, SACCHARIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1450

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128849

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AA0128849
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COMPODS., WITH TERMINAL
GROUPS CONTG. LARGER THAN OR EQUAL TO 3 OH GROUPS BOUND WITH C ATOMS,
ARE PREPD. BY REACTION OF AN ALPHA, OMEGA,DICHLOROPOLY(DIALKYL (ARYL,
ALKENYL)SILOXANE) POLYMER HOMOLOG MIXT. WITH AN ORGANOMAGNESIUM COMPD.,
RMGX, IN WHICH R IS ALPHA FULLY ACETYLATED RESIDUE OF ANY MONO OR
OLIGOSACCHARIDE, AND X IS CL OR BR. DIACETYLATION IS CARRIED OUT BY
KNOWN METHODS. FACILITY: SSR AND SPECIAL CONSTRUCTION BUREAU OF
CHEMIZATION OF THE NATIONAL ECONOMY, LATVIAN SSR AND SYNTHETIC RUBBER.

UNCLASSIFIED

1/2 015

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE—PMR SPECTRUM AND STRUCTURE OF BUTENYL LITHIUM -U-

AUTHOR—(03)—DGLINSKAYA, E.R., PODDUBNYY, I.YA., TSERETELI, I.YU.

COUNTRY OF INFO—USSR

SOURCE—DOKL. AKAD. NAUK SSSR 1970, 191(4), 862-5 (PHYS CHEM)

DATE PUBLISHED—70

SUBJECT AREAS—CHEMISTRY

TOPIC TAGS—MAGNETIC RESONANCE, SPECTRUM, MOLECULAR STRUCTURE,
ORGANOLITHIUM COMPOUND, ROTATIONAL SPECTRUM

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED

PROXY REEL/FRAME—2000/0696

CIRC ACCESSION NO—AT0124368

UNCLASSIFIED

STEP NO—UR/0020/70/191/004/0862/0865

2/2 015

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0124368
ABSTRACT/EXTRACT—(U) GP-0 ABSTRACT. PMR SPECTRA WERE SHOWN FOR
BUTENYLLITHIUM IN THE 183-293DEGREESK INTERVAL ILLUSTRATING THAT IN ME
SUB2 O SOLN. THIS COMPD. EXISTS AS CONTACT ION PAIRS, THE ANIONS OF
WHICH ARE CROTYL GROUPS WITH CIS AND TRANS DISPOSITIONS OF THE ME
GROUPS. AT LESS THAN 1800DEGREESK THE ROTATION OF ME ABOUT THE C SUB1-2
BOND CEASES AND THE ANION BECOMES FLAT. FACILITY: VSES. NAUCH.
ISSLED. INST. SIN. KAUCH. IM. LEBEDEVA, LENINGRAD, USSR.

UNCLASSIFIED

473 0191 1000
UNCLASSIFIED
TITLE--UNSATURATED DERIVATIVES OF HYDANTOIN. I. SYNTHESIS OF N-METHYL
DERIVATIVES OF 5-CARBOXYMETHYLIDENEHYDANTOIN AND HYDANTOIN, 5, ACETIC
AUTHOR-(04)--RUTKOVSKIY, G.V., IVIN, B.A., SOCHILIN, YE.G., TSERETELI,
I.YU.
COUNTRY OF INFO--USSR
SOURCE--ZH. OБSHCH. KHM. 1970, 40(2), 389-95
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, UV SPECTRUM, NMR SPECTRUM, IR SPECTRUM,
UREA DERIVATIVE, CYCLIC GROUP

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1963

STEP NO--UR70079/70/040/002/0389/0395

CIRC ACCESSION NO--AP0112928

UNCLASSIFIED

U19
CIRC ACCESSION NO--AP0112928

UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TREATING
5,CARBETHOXYMETHYLENEHYDANTOIN (I) WITH CH SUB2 N SUB2 GAVE THE 3-ME
DERIV. (I), M. 134DEGREES. HOLDING AN EQUIMOLAR MIXT. OF DI-ET
ASPARTATE AND MENCO 12 HR GAVE 70PERCENT DI-ET GAMMA
METHYLUREIDOSUCCINATE, M. 86DEGREES, WHICH HEATED WITH 20PERCENT HCL
GAVE 80PERCENT 3,METHYL,5,HYDANTOINYLAETIC ACID, M. 177DEGREES, WHICH
WITH 1 MOLE BR SUB2 IN ACOH AT 100DEGREES, THEN WITH HOT H SUB2 O, GAVE
70PERCENT 3,METHYL,5,CARBOXYMETHYLENEHYDANTOIN, DECOMP'D. 300DEGREES,
WHICH WITH DRY HCL IN ETOH GAVE 80PERCENT I. SIMILARLY, BUT WITH EXCESS
CH SUB2 N SUB2, WAS PREPD. 100PERCENT 1,3,DIMETHYL,5,
CARBETHOXYMETHYLENEHYDANTOIN, M. 56DEGREES. REFLUXING ME N,
METHYLASPARTATE WITH BZNCO IN C SUB6 H SUB6 12 HR GAVE 72PERCENT MEO
SUB2-CCH-SUB2-CH(CO) SUB2-H) NMECONHBZ, M. 113DEGREES, WHICH WITH HCL AS
ABOVE GAVE 1,METHYL,5,HYDANTOINYLAETIC ACID, M. 170DEGREES, WHICH WITH
MENCO IN 6 HR AT 40DEGREES GAVE 87PERCENT 1,3,DI,ME ANALOG, M.
1300DEGREES. HEATING I IN AC SUB2 O 5 HR GAVE 82PERCENT 3-AC DERIV., M.
138DEGREES, WHILE TOSYL CHLORIDE IN ET SUB3 N-DIOXANE GAVE 86PERCENT
3-TOSYL DERIV., M. 205DEGREES. TREATED WITH CH SUB2 N SUB2 THESE GAVE
THE RESP., 1-ME DERIVS., M. 53 AND 157DEGREES, RESP. THE FORMER AND
ALC. KOH GAVE IN 3 HR 75PERCENT I,
METHYL,5,CARBETHOXYMETHYLENEHYDANTOIN, M. 128DEGREES. I,
PARAFORMALDEHYDE, AND PIPERIDINE IN DMF GAVE 70PERCENT
3,PIPERIDINOMETHYL,5,CARBETHOXYMETHYLENEHYDANTOIN, M. 87DEGREES. UV AND
NMR SPECTRA DATA, AND IR CURVES WERE GIVEN. ALL THE 5,HYDANTOINYLAETIC
ACIDS PREPD. ABOVE HAD THE DIKETO STRUCTURES, AS REFLECTED IN THEIR

UNCLASSIFIED

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1

019
CIRC ACCESSION NO--AP0112928
ABSTRACT/EXTRACT--FACILITY:

UNCLASSIFIED

PROCESSING DATE--16OCT70

LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1"

USSR

UDC 621.774.35.001.4

PLYATSKOVSKIY, O. A., Doctor of Technical Sciences, POROKHNIKOV, YU. Z.,
SULAEZ, O. N., SEMENIKOV, V. M., USIRIYA, A. YE., Candidate of Technical
Sciences, and ~~TANSEV~~, P. A.
Principal Parameters of the Deformation Process by High-Temperature Thermo-
mechanical Treatment of Pipes"

Dnepropetrovsk Metallurgicheskaya i Gornorudnaya Promyshlennost', No 4,
(70), Jul-Aug 71, pp 34-37

Abstract: At many active pipe rolling plants, reduction mills can be utilized for high-temperature thermomechanical treatment (HTMT) of pipes. Workers of the All-Union Scientific Research Institute of Pipes and specialists of the Rustavsk Metallurgical Plant have developed the technology of HTMT of hot-rolled compressor pump pipes (73 x 5.5 mm) of carbon steels (brands 20 and 35) and low-alloyed steel (35G25) by rolling on a 20-cage reduction mill with rolls 350-400 mm in diameter. The HTMT technology is discussed by reference to diagrams showing the general arrangement and the change of the metal pressure on rolls under different rolling conditions. In HTMT the metal pressure on the rolls of pipes with precooling in deforming cases is approximately twice as high as in the standard process of hot reduction. Investigation data were used for planning an industrial experimental produc-

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PLYATSKOVSKIY, O. A., et al., Metallurgicheskaya i Gornorudnaya Promyshlennost', No 4 (70), Jul-Aug 71, pp 34-37

tion sector of high-quality compressor pump pipes. Two illustrations, one table, three bibliographic references.

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USSR

UDC: 51

ASYLKZHAYEV, K. A., TSEREVITINOV, B. F., YAROVITSKIY, N. V.

"Controlling the Quality of Goods in the Warehouse Storage Process"

V sb. Mat. metody issled. i optimiz. sistem (Mathematical Methods of Studying and Optimizing Systems--collection of works), Kiev, 1971, pp 123-135 (from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V570)

[No abstract]

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USSR

UDC: 681.327

BURDONSKIY, I. N., GRISHIN, M. P., KURBANOV, Sh. M., MARKELOV, V. P., SER-
GEYEV, V. V., SIDORENKO, V. R., TSEREVITINOV, S. S., SHALUROVA, L. M.,
Moscow

"Computer Processing of Optical Interference Patterns"

Novosibirsk, Avtometriya, No 4, Jul/Aug 71, pp 21-26

Abstract: The paper is a report of initial experiments in using a photometric scanning system in conjunction with a general-purpose computer for analyzing halftone images (optical interference patterns). Line-scanning of the pattern was used for computer input through an analog-digital converter with 64 levels of quantization. A flowchart of the processing program is given. The results of computer processing on the Minsk-22 computer are compared with manual analysis for plasma interference patterns. Excellent agreement is observed with a time reduction of more than two orders of magnitude for machine processing. The authors thank V. S. Vaynshteyn and M. I. Pergament for taking part in the initial phase of the work. Three figures, bibliography of five titles.

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- 62 -

1/2 018
TITLE--CHANGES IN THE ACTIVITY OF LACTATEDEHYDROGENASE OF THE BLOOD SERUM
AND URINE IN ACUTE RENAL INSUFFICIENCY -U-
UNCLASSIFIED
PROCESSING DATE--02OCT70
AUTHOR--(03)-TSEILINGER, T.B., MARKELOV, I.M., OREL, S.G.

COUNTRY OF INFO--USSR

SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 3, PP 77-80
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LACTATE DEHYDROGENASE, BLOOD SERUM, URINE, RENAL FAILURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0819

STEP NO--UR/0504/70/042/003/0377/0080

CIRC ACCESSION NO--APO102780

UNCLASSIFIED

2/2 018

CIRC ACCESSION NO--AP0102780

UNCLASSIFIED

PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A TOTAL OF 54 PATIENTS WITH ACUTE RENAL INSUFFICIENCY OF VARIOUS ETIOLOGY WERE EXAMINED. TOTAL ACTIVITY OF LACTATEDEHYDROGENASE AND ACTIVITY OF ISOENZYMES OF LACTATEDEHYDROGENASE IN THE BLOOD PLASMA DURING OLIGOANURIA WAS DETERMINED IN 39 PATIENTS. ISOENZYMES OF LACTATEDEHYDROGENASE OF THE BLOOD PLASMA AND URINE DURING RESTORATION OF THE RENAL FUNCTION WERE STUDIED IN 15 PATIENTS. AN INCREASE OF THE LACTATEDEHYDRATE ACTIVITY IN THE BLOOD AND URINE MAINLY AT THE EXPENCE OF RAPID MOVING ISOENZYMES WAS NOTED. THE TOTAL ACTIVITY OF LDG OF THE BLOOD WAS NOT CHARACTERIZED BY THE EXTENT OF THE RENAL TISSUE INJURY. ALL FIVE ISOENZYMES OF LDG WERE REVEALED IN THE URINE. WITH RESTORATION OF THE RENAL FUNCTION THE ACTIVITY OF ISOENZYMES IN THE BLOOD AND URINE BECAME NORMALIZED. THE DYNAMIC OBSERVATION OVER THE CHANGE IN THE ACTIVITY OF LDG MADE IT POSSIBLE TO JUDGE UPON THE RESTORATION OF THE RENAL FUNCTION.

UNCLASSIFIED

172 007
TITLE--COMPLEXING OF PALLADIUM WITH 4,5,DIPHENYL,2,MERCAPTOIMIDAZOLE -U-
UNCLASSIFIED PROCESSING DATE--04DEC70

AUTHOR--(03)-MIKHAYLENKO, M.I., TSERKASEVICH, K.V., KIZHIKO, P.O.

COUNTRY OF INFO--USSR

SOURCE--UKR. KHIM. ZH. 1970, 36(4), 326-9

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PALLADIUM COMPOUND, COMPLEX COMPOUND, MERCAPTAN, IMIDAZOLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0898

STEP NO--UR/0073/70/036/004/0326/0329

CIRC ACCESSION NO--AP0137926

UNCLASSIFIED

CIRC ACCESSION NO--AP0137926 UNCLASSIFIED PROCESSING DATE--04DEC70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PD FORMS A 1:2 COMPLEX, ABSORBANCE
MAX. AT 440NM, WITH 4,5-DIPHENYL,2, MERCAPTOIMIDAZOLE. THE OPTIMUM
ACIDITY IS 2-5N HClO SUB4. THE APPARENT FORMATION CONSTS. AS DETO. BY
ISOMOLAR SERIES AND BY HIGH FREQUENCY TITRN. ARE (2.7-2.9) TIMES 10
PRIME NEGATIVE11 IN AQ. ME SUB2 CO AND (1.46-2.7) TIMES 10 PRIME
NEGATIVE11 IN AMYL ALC.
KHOLOD. PROM., ODESSA, USSR. FACILITY: ODESSA TEKHNOL. INST. PISHCH.

UNCLASSIFIED

1/2 020

UNCLASSIFIED

PROCESSING DATE--20NOV70

TITLE--PHOTOMETRIC DETERMINATION OF PALLADIUM USING 2, MERCAPTOIMIDAZOLE
DERIVATIVES -U-

AUTHOR--(C3)--TSERKASEVICH, K.V., KNIZHKO, P.O., MIKHAYLENKO, M.I.

CCOUNTRY OF INFO--USSR

SOURCE--ZH. ANAL. KHM. 1970, 25(3), 532-4

DATE PUBLISHED----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHOTOMETRIC ANALYSIS, PALLADIUM, METAL CHEMICAL ANALYSES,
IMIDAZOLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0465

STEP NO--UR/0075/70/025/003/0532/0534

CIRC ACCESSION NO--AP0126217

UNCLASSIFIED

020
CIRC ACCESSION NO--AP0126217 UNCLASSIFIED PROCESSING DATE--20NOV70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHOTOMETRIC DETN. OF PD WITH
2,MERCAPTOIMIDAZOLE (I) IN AN Aq. MEDIUM (50-500 MUG PD) AND THE EXTN.
PHOTOMETRIC DETN. OF PD WITH 4-PHENYL,2,MERCAPTOIMIDAZOLE (II) AND
4,5-DIPHENYL, 2,MERCAPTOIMIDAZOLE (III) (5-50 MUG PD) HERE STUDIED. IN
THE FURMER CASE ADD TO THE SOLN. CONTG. PD 1.5 ML 5N HCL AND 4 ML 0.1M
I; DIL. TO 15 ML WITH H SUB2 O AND MEASURE THE ABSORBANCE AT 440 NM OR
BY USING A NO. 4 FILTER. Li, Mg, Ca, Nz, Sr, Cd, Ba, Hg, Al, Ti, Sn,
Pb, V, Bi, Cr, Mo, W, Mn, Fe, Co, And Ni, 50-100 FOLD, DO NOT INTERFERE
IN THE DETN. IN THE 2ND METHOD ADD TO THE SOLN. CONTG. PD 1 ML 5N HCL
AND DIL TO 5 ML WITH H SUB2 O. THEN ADD 6 ML 0.01M II OR III IN ANYL
AND DET. SPECTROPHOTOMETRICALLY AT 440 NM OR BY USING A NO. 4 FILTER;
500-2000 FOLD AMTS. OF THE ABOVE ELEMENTS DO NOT INTERFERE.
FACILITY: ODESSA TECHNOL. INST. FOOD REFRIG. IND., ODESSA, USSR.

UNCLASSIFIED

USSR

Inorganic Compounds

UDC 543.70

LUGININ, V. A. and TSEPOVITSKAYA, I. A.

"Separation of Uranium (IV) and (VI) by Electrophoresis"

Leningrad, Vestnik Leningradskogo Universiteta, No 1, Feb 72, pp 138-140

Abstract: The use of complexon solution during electrophoresis on paper as "buffer" solutions in determining inorganic ions has already been described by the authors. Here, using their previous procedures, the authors tested uranium (IV) and (VI) content in complexon III solutions. The method appears effective.

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UDC: 621.317.351:621.397

BELEN'KIY, Ya. Ye., MIKHALEVSKII, V. I., TISHCHENKO, A. G., TSERKOVNYUK, E. A.

"A Device for Automatic Isolation of Television Signal Test Lines and Their Elements"

Moscow, Otkrytiya, izobreteniya, promyshlennye obraztsy, tovarnyye znaki,
No 3, Jan 71, Author's Certificate No 291371, Division H, filed 15 Apr 69,
published 6 Jan 71, p 161

Translation: This Author's Certificate introduces a device for automatically isolating the test lines of a television signal and their elements. The device contains a synchroselector, a selector of line and frame pulses, a line frequency pulse oscillator, a half-frame separation circuit, a switch for selecting the location of a line element, a cadence pulse generator and a flip-flop with separate triggering. As a distinguishing feature of the patent, the device is simplified and its operational reliability is improved by connecting two multiphase multivibrators in series through flip-flops with separate triggering between the selector of line and frame pulses and the switch for selecting the location of a line element. A signal from the line frequency pulse oscillator is sent to the inputs of these two multivibrators, and the cadence pulse generator is connected to the third multiphase multivibrator. The outputs of this third multivibrator are connected to coincidence circuits to which signals are sent from the line position selector switch.

124

USSR

UDC 621.397:621.396.4

BELENKIY, Ya. Ye., MIKHALEVSKIY, V. I., TIDENKO, A. G., TSERKOVNYUK, E. A.

"Device for Automatic Supervision of Test Lines and Their Division into a Given Number of Intervals"

Otbor i peredacha inform. Resp. mezhved. sb. (Information Sorting and Transmission. Republic Interdepartmental Collection), 1970, vyp. 23, pp 77-82 (from RZh-Radio-tehnika, No 8, Aug 70, Abstract No 8G220)

Translation: This article contains a description of an economical transistor unit permitting automatic separation of arbitrary TV signal line intervals and also separation of them into a given number of intervals. The pulse train generated by the unit realizes control of the transducers for shaping test signals of complex shape. The bibliography has three entries.

1/1

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1

TITLE--DEPARTMENTAL CLASSIFICATION OF COLD FORMED PARTS -U-
UNCLASSIFIED
PROCESSING DATE--27NOV70

AUTHOR--(02)-TSERNA, A., GIRSH, YU.

COUNTRY OF INFO--USSR

SOURCE--STANDARDY I KACHESTVO, 1970, NR 6, PP 70-72
DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, BEHAVIORAL AND SOCIAL
SCIENCES
TOPIC TAGS--ECONOMICS COLD WORKING, MATHEMATICAL ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1465

CIRC ACCESSION NO--AP0130398

STEP NO--UR/0422/70/000/006/0070/0072

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1"

2/2 007

CIRC ACCESSION NO--AP0130398

UNCLASSIFIED

PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE PRESENTS A
CONSIDERATION OF THE PROBLEM OF DEVELOPMENT OF SYSTEM OF DESIGN AND
PRODUCT CLASSIFICATION, AND CALCULATIONS OF ENGINEERING AND ECONOMIC
EFFICIENCY OF INTRODUCTION OF THE SYSTEM.

UNCLASSIFIED

USSR

UDC 547.26.118.07

SHAROV, V. N., KLEBANSKIY, A. L., BARTASHEV, V. A., VALYASNIKOVA,
T. D., GRINBLAT, M. P., SOKOLOV, YE. I., TSEKETELI, I. YU.

"A Method of Producing Organofluoride Cyclic Esters of Alkyl
(aryl)phosphonic Acids"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye
Znaki, No 17, 1970, Author's Certificate No 270732, filed 25 Mar
69, F 23

Abstract: This Author's Certificate introduces a method of pro-
ducing organofluoride cyclic esters of alkyl(aryl)phosphonic acids.
As a distinguishing feature of the patent, alkyl(aryl)dihalophos-
phonates are interacted with polyfluoroalkylene glycols in the
presence of a tertiary amine in an inert solvent.

1/1

USSR

TSERTSVADZE, G. N.

UDC: 51:621.391

"A Stochastic Automaton With Hysteresis Tactics"

Tr. Tbilissk. un-ta (Works of the Tbilisi University), 1970, 135, pp 57-61
(from RZh-Kibernetika, No 1, Jan 71, Abstract No IV368)

Translation: A design is proposed for a stochastic automaton with hysteresis tactics which has asymptotically optimum behavior in any stationary random medium.

1/1

- 11 -

TITLE--⁰¹² ON RATE OF ESTABLISHING FINAL DISTRIBUTION IN CERTAIN GAME OF MANY
IDENTICAL AUTOMATA -U-
AUTHOR--TSERTSVADZE, G.N.

UNCLASSIFIED

PROCESSING DATE--16OCT70

COUNTRY OF INFO--USSR

SOURCE--AVTOMATIKA I TELEMEKHANIKA, 1970, NR 4, PP 81-83
DATE PUBLISHED-----70

SUBJECT AREAS--MATHEMATICAL SCIENCES

TOPIC TAGS--EIGENVALUE, GAME THEORY, ASYMPTOTIC SOLUTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1725

CIRC ACCESSION NO--APO118703

UNCLASSIFIED

STEP NO--UR/0103/70/000/004/0081/0083

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1

472 012

CIRC ACCESSION NO--AP0118703
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERE ARE OBTAINED EIGENVALUE
ESTIMATIONS IN THE SIMPLEST SYMMETRIC GAME OF MANY IDENTICAL AUTOMATA
WITH EACH OF THEM HAVING TWO ACTIONS. THERE IS STUDIED THE ASYMPTOTIC
BEHAVIOUR OF THE AUTOMATA IN THE CASE OF THE INFINITE INCREASE OF THE
NUMBER OF AUTOMATA AND THEIR MEMORY CAPACITY.

UNCLASSIFIED

PROCESSING DATE--160C170

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1"

Automata

USSR

TSERTSVADZE, G. N., Tbilisi

UDC 62-50

"On the Speed with Which a Final Distribution is Obtained in a Game of Many Identical Automata"
Moscow, Avtomatika i Telemekhanika, No 4, April 70, pp 81-83

Abstract: The game under discussion is one in which each of the automata has two plays. At each step of the game, the automata make a choice; then they are independently penalized with a probability which is a function of the number of automata making the same choice. The players are "stubborn" automata which do not change their plays until they have suffered a succession of n penalties, where n is determined by the memory capacity. Thus the process of changing the play of an automaton can be described by a simple homogeneous Markov chain with two states, if only the points in time which are multiples of n are considered.

The following relationships are used to determine boundaries on the transition probability matrix: 1) The spur of a matrix is equal to the sum of its eigenvalues; 2) The probability of no transition in the play of the first k automata

1/2

TSERTSVADZE, G. N., Avtomatika i Telemekhanika, No 4, April 70, pp 81-83

is greater than or equal to the probability of no transition at all; 3) Since the game is ergodic, there is always a unique eigenvalue equal to unity. This leads to the conclusion that the limit of the maximum of the eigenvalue approaches 1 as the number of players increases without limit; in other words, the time required to attain a final state in this game of stubborn automata increases without limit as the number of players increases without limit.

2/2

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1

VARIABLE STARS AND METHODS FOR THEIR INVESTIGATION -U-
UNCLASSIFIED
PROCESSING DATE--20NOV70
AUTHOR--TSESEVICH, V.P.

COUNTRY OF INFO--USSR

SOURCE--PEREMENNYE ZVEZDY I SPOSOBY IKH ISSLEDOVANIYA, MOSCOH,
PEDAGOGIKA, 1970, 237 PP
DATE PUBLISHED--70

SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS

TOPIC TAGS--VARIABLE STAR, STELLAR ECLIPSE, STELLAR SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0270

CIRC ACCESSION NO--AM0132524

STEP NO--UR/0000/70/000/000/0001/0237

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1"

CIRC ACCESSION NO--AM0132524
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--20NOV70

PHYSICS OF STARS 9. STAR ECLIPSES 35. VARIABILITY OF YOUNG STARS
63. PULSATNG STARS 76. EXPOLDING STARS 114. VARIABLE STARS IN
STAR SYSTEMS 126. METHODS FOR VISUAL AND PHOTOGRAPHIC OBSERVATIONS OF
LUMINOSITY OF VARIABLE STARS 135. PHOTOELECTRIC OBSERVATIONS OF
VARIABLE STARS 176. CATALOG OF SELECTED VARIABLE STARS, CHARTS OF
SURROUNDINGS AND MAGNITUDES OF COMPARISON STARS 205.

UNCLASSIFIED

JPRS 55687
KB Apw 1972

RADIOBIOLOGICAL EFFECTS AFTER 3-YEAR GAMMA-IRRADIATION OF DOGS

Article by Yu. G. Grigor'ev, B. A. Markov, V. I. Popov, A. A. Akhunov,

Kamchikayeva, B. G. Ovchinnikova, A. V. Sedov, and V. A. Korsakov; Moscow;

submitted for publication 25 March 1971]

[IPC 612.014.482.4]

Abstract: This paper summarizes the results of a three-

year radiobiological experiment on dogs. In several ex-

periments (21 to 150 rad per year) and chronic irradiation com-

bined with acute exposures (total doses of 190 rad per year) were applied. Clinical doses of 190 rad

logical and cytological examinations demonstrated that

the animals maintained a satisfactory physical condition

and exhibited no serious organic disease. However,

a decrease in their compensatory radiation damage, how-

ever, a change in their reactivity were noted.

A lack of adequate information in the literature on the biological

effects induced by constant exposure to ionizing radiation in the biological

experiment on a large number of dogs served as a basis for conducting a spe-

cial experiment on a large number of dogs. The scientific program for a spe-

cific experiment and the results obtained one and two

years after beginning this experiment have been published earlier (Yu. G. Grigor'ev, et al., 1968, 1970).

This paper gives materials obtained after three years of irradia-

tion conditions are given in Table 1.

After three years of the experiment the condition of the animals, temperature measurement, measurements of systematic examinations (inspections, temperature, conjunctivitis, dyspepsis, etc.) was low and did not exceed the correspond-

USSR

UDC 614.3/.4.07(470.311):613.6

KURLYANDSKIY, B. A. and TSESSARSKIY, A. V., Moscow City Sanitary Epidemiology Station

"Research and Field Work in Occupational Hygiene Done by the Moscow Sanitary Epidemiology Station"

Moscow, Gigiiena Truda i Professional'nye Zabolevaniya, No 9, Sep 73, pp 43-44

Abstract: Recent changes in the Sanitary Epidemiology Station are discussed, including the predominance of research over inspection, the acquisition of modern laboratory equipment, and the organization of new sub-sections such as noise-vibration, toxicology, occupational physiology, magnetic fields and isolation of prophylactics with carcinogenic action. Several examples of practical actions carried out by the regional sections are given. The municipal section worked on such problems as nonstandard vibrating equipment, irritating latexes and toxicology. Research conducted in the last ten years has been applied in foundries and the furniture, shoe and perfume industries and others.

1/1

USSR

UDC: 621.317.8(088.8)

BADINTER, Ye. Ya., ZELIKOVSKIY, Z. I., KARASIK, N. Ya., PONYATOV, G. A.,
SAVENKOV, A. N., FARMAKOVSKIY, B. V., TSFETENS, V. P., SHIROKSHIN, K. A.

"A Resistor With a Winding of Cast Microwire in Glass Insulation"

USSR Author's Certificate No 287161, filed 24 Nov 69, published 1 Feb 71
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V334 P)

Translation: This Author's Certificate introduces a resistor wound with cast microwire in glass insulation. The body of the resistor is made from an electrical insulating material such as glass. To improve the stability of operational characteristics in the negative temperature region, the core and insulation of the microwire are made from materials whose effective temperature coefficient of expansion is close to that of the body material. A modification of the resistor is proposed which is distinguished by the fact that borosilicate electric vacuum glass is used as the insulating material, and a ternary or more complex alloy is used as the core material. The components of the alloy are taken in the following ratios (percent): Cr--8-12, Mn--8-16, Si--6-12, Mo--0.1-5, Re--less than 2.2, Ce--less than 1.2, Pr--less than 1.2, the remainder--Ni-Co.

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USSR

UDC 621.317.8

SPIVAK, N. D., STARUSH, E. G., TSETENS, V. P.

"On the Cold Resistance of Microwire Resistors Made From Nickel-Based Alloy"

V sb. Mikroprovod i pribory soprotivl. (Microwire and Resistance Devices --collection of works), vyp. 7, Kishinev, 1971, pp 147-152 (from RZh-Radiotekhnika, No 8, Aug 71, Abstract No 8V354)

Translation: In order to determine the effect which repeated cold cycles have on resistors made from M94 and M95 nickel-base alloys developed by Ye. Ya. Badinter and A. L. Gadolin, they were cooled to a temperature of -60°C and held at this temperature for 4 hours. It was found from the results of the tests that resistors based on these alloys are 10-20 times as resistant to cold as similar resistors made from manganin microwire, which is extensively used for making microwire resistors. At the same time, the stability of "M" resistors with respect to climatic and mechanical effects is on a level with that of type MVSG resistors made from manganin-based microwire. Bibliography of three titles. Ye. M.

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USSR

UDC 621.317.725

GORELIKOV, N. I., REYTBURG, M. Ya., FIGUROVSKIY, Ye. A., TSETENS, V. P.

"Use of Resistive Circuit Elements in High-Speed Automatic Digital Voltmeters"

V sb. Mikroprovod i pribory soprotivl. (Microwire and Resistance Devices --collection of works), vyp. 7, Kishinev, 1971, pp 160-164 (from RZh-Radiotekhnika, No 8, Aug 71, Abstract No 8A299)

Translation: The authors consider the use of serially produced resistive circuit elements in the digital-analog converters of microminiature automatic digital voltmeters. The relations between some characteristics of such voltmeters of the balanced type and the parameters of individual elements of the converters are discussed. Recommendations are presented relative to the use of given elements. A. K.

1/1

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USSR

TSEYTIN, G. S.

UDC: 51:801

"An Algorithm for Simplified Syntactic Analysis"

V sb. Probl. kibernetiki (Problems of Cybernetics--collection of works),
vyp. 24, Moscow, "Nauka", 1971, pp 227-242 (from RZh-Kibernetika, No 4,
Apr 72, Abstract No 4V606)

Translation: A certain fairly simple algorithm is outlined which on the basis of procedures for verifying the admissibility of a government and the admissibility of a peak answers the following questions for any statement: 1) does the statement have at least one admissible analysis; 2) if yes, then which of the governments is encountered in at least one of the permissible analyses; 3) which of the homonyms is selected in at least one of the permissible analyses (if there are any). A computer realization of this algorithm is considered. Bibliography of 5 titles. Author's abstract.

1/1

USSR

UDC 542.952.67541.15

VLASOV, A. V., KOMAROVA, L. I., Corresponding Member of the
Academy of Sciences USSR KORSHAK, V. V., MALAKHOVA, L. I.,
MIKHELEVA, G. A., TSETLIN, B. L., SHABLYGIN, M. V., Institute of
Organic Elemental Compounds, Moscow, Academy of Sciences USSR; All-
Union Scientific-Research Institute of Synthetic Fibers, Kalinin,
State Committee for Chemistry USSR

3

"Production of Multilayer Graft-Polymerized Materials ("Pemosors")
by Radiation Polymerization in the Gas Phase"

Moscow, Doklady Akademii Nauk SSSR, Vol 193, No 3, 21 Jul 70, pp
615-617

Abstract: Multiple graft polymerization should lead to the formation of multilayered materials, in the opinion of the authors. A synthesis was developed for doubly grafted materials by gas-phase polymerization of various monomers to stretched polyethylene and polypropylene films and fibers. The graft polymerization was carried out by irradiating with X-rays substrates (of fibers and films and singly grafted materials) in the presence of unsaturated

1/3

USSR

VLASOV, A. V., et al, Doklady Akademii Nauk SSSR, Vol 193, No 3,
21 Jul 70, pp 615-617

The passage of the orienting effect of the substrate on the formation of the third graft layer through a nonoriented intermediate layer may possibly be due to a repetition of the microrelief of the surface of the orienting original substrate or there may be a long-range effect of charged point defects.

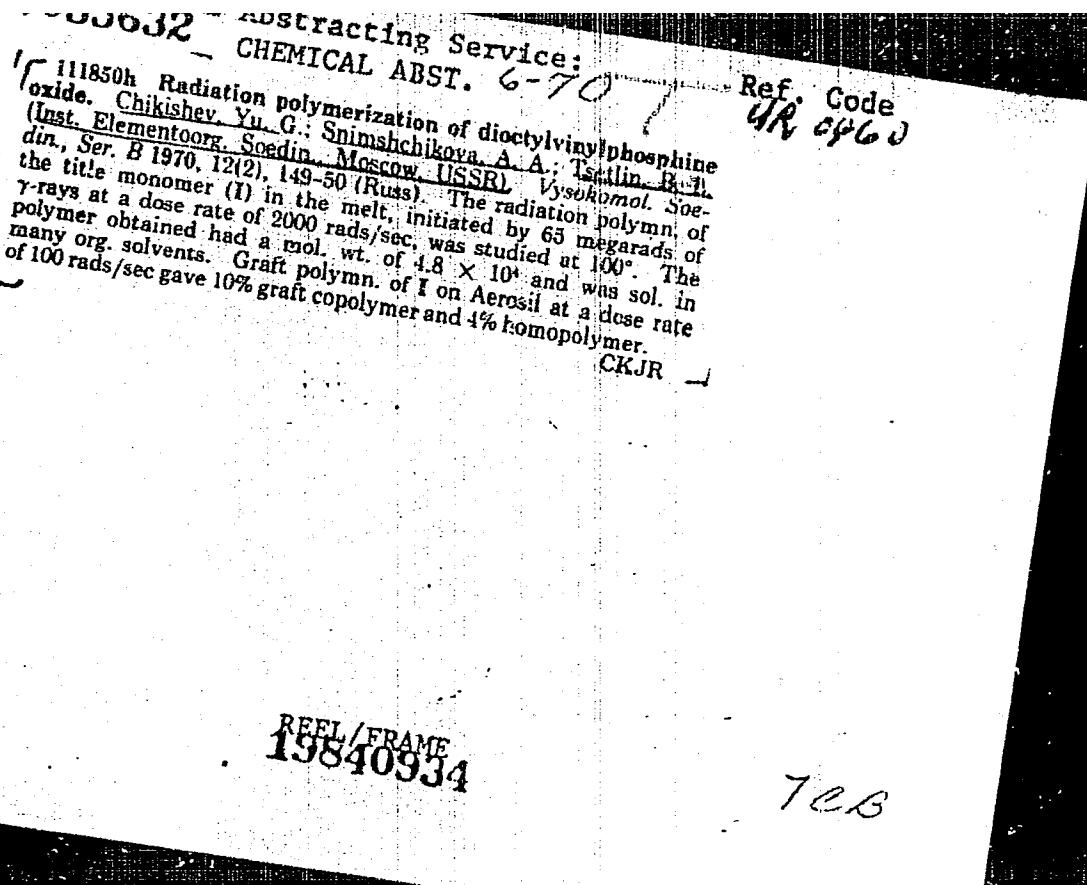
3/3

USSR

VLASOV, A. V., et al, *Doklady Akademii Nauk SSR*, Vol 193, No 3,
21 Jul 70, pp 615-617

monomer vapors. The following monomer pairs were so polymerized: acrylonitrile/vinylidene chloride, vinylidene chloride/acrylonitrile, vinylidene chloride/acrylic acid, acrylic acid/vinylidene chloride, vinyl chloride/vinylidene chloride, styrene/vinylidene chloride, methyl methacrylate/vinylidene chloride, vinylidene chloride/methyl methacrylate, acrylic acid/acrylonitrile. Films and fibers of a three-layer structure with minute particles between the layers were obtained. The orientation of the grafted layers was studied by IR spectroscopy. It was found that a singly grafted material will add a third layer whenever its first layer has a highly ordered structure (for instance, polyvinylidene chloride, polyacrylonitrile). The orienting effect of the grafted layer is retained even when it is quite thick. Formation of the new (third) layer begins in the interfibrillar channels of the intermediate (second) layer and the process follows the same scheme as the one in the *gas*-phase polymerization on the initial stretched substrate.

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USSR

BABKIN, U. YU., and TSETLIN, B. L.

UDC 541.15+541.6+546

"Radiational Grafting Polymerization as a Method for Modification of Polymers
and Inorganic Materials"

Moscow, Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva imeni D. I. Mendeleyev,
Vol 18, No 3, 1973, pp 263-269

Abstract: The methods of synthesis and the areas of application of grafted systems have been analyzed in which homogeneity or interphase contacts are fixed by the chemical bonds between two types of polymer chains or between the polymer chains and the surface of mineral bodies. The question of the stability of such systems and the distribution of the grafted polymer in such systems is being discussed. Examples of practical utilization of radiational grafting polymerization have been described used in modifying textile fibers, fabrics and filtering materials with the overall goal of improving their utilization properties as mineral-organic fillers and pigments. It has been shown that this method has possibilities in producing oriented grafted systems, materials with novel compositions and ion exchange materials.

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USSR

TSETLIN, R. S.

UDC 539.3

"Application of the Vlasov-Kantorovich Method to the Calculation of the
Closed Cylindrical Shell for a Local Load"

Tr. TsNII stroit. konstruktsiy (Works of the Central Scientific Research
Institute of Structural Parts), 1971, No. 20, pp 106-117 (from RZh-Mekhanika,
No 8, Aug 72, Abstract No 8V109)

Translation: The calculation of a circular cylindrical shell of a radius R for the action of a local load distributed along a line which is a projection of a circle of radius $r \leq R$ on the shell (normal to its axis) is discussed. The load is axisymmetric on a circumference of radius r . The geometric relationships between the deformations and displacements are taken from the theory of hollow shells. Displacements are represented in the form of expansions in series of the products of trigonometric functions of one coordinate times the unknown coefficients, which are functions of the other coordinate. The equations of the problem were obtained by the energy method and are reduced to a system of eight first-order ordinary differential equations. The solution is given by a matrix method. V. S.
Khar'kov.

1/1

USSR

BRIKMAN, L. I., TSETLIN, V. M., ROGINSKAYA, YE. YA., ZHUK, YE. B., KLIMEN-
CHUK, V. I., POZHARSKAYA, YE. B., and VOLKOVA, A. P.

"Composition for the Control of Household Insects Specifically for Cock-
roaches and Bugs"

USSR Author's Certificate No 251515, filed 1 Dec 70, published 10 Oct 72
(from RZh-Khimiya, No 19, Oct 73, Abstract No 19N495 p)

Translation: To lower the toxicity of the preparation towards warm-blooded
animals without lowering its effectiveness against household insects, pyre-
thrins are added to the aerosol preparation containing γ -GKhTsG [hexachloro-
cyclohexane -- HCCH] γ . The composition of such a preparation: γ -HCCH 0.21%,
DDT 1.8%, pyrethrin extract containing $>25\%$ of the active material 0.42%,
xylene 5.0%, a mixture of freon-12 and freon-11 55%, kerosene up to 100%.

1/1

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USSR

UDC 614.882-084.48

ALEKSEYEVA, M. I., MANIKOV, L. M., TSETLIN, V. M., MAL'KOV, O. S., SAVEL'YEVA, A. R., and STEPANOVA, O. L., All-Union Institute of Disinfection and Sterilization, Moscow

"An Aerosol Method for the Disinfection of Ambulances"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, 1973, pp 137-141

Abstract: Evaluation was made of the efficacy of different concentrations of hydrogen peroxide (I) aerosols in disinfecting ambulance interior and exterior surfaces. The surfaces were contaminated with *Staphylococcus aureus* or anthrax spores to a density of 10^5 - 10^7 cells/cm 2 . The results showed that complete sterilization of the *staphylococcus* cells on interior surfaces could be attained with 3% I aerosol in 30 min at -6° to 22° and with an aerosol volume of 100 ml/m 2 , whereas sterilization of the surfaces contaminated with the spores required 10% I and a volume of 200 ml/m 2 . For the exterior surfaces 6% I, 400 ml/m 2 , for 30 min was required to sterilize surfaces contaminated with *staphylococcus*, and 10% I was required for surfaces contaminated with the anthrax spores. Essentially similar results were obtained with calcium hypochlorite (5%, 100 ml/m 2 , 60 min) and formaldehyde (10% and 20% for *staphylococcus* and anthrax spores, respectively, 100 ml/m 2 , 30 min).

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USSR

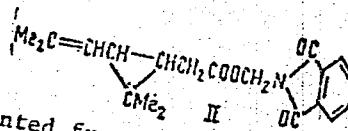
UDC 632.95
(4)

BESSONOV^A, I. V., VASHKOV^V, V. I., VOLKOV^{Yu. P.}, VOLKOVA^{A. P.}, ZHUK^{Ye. B.},
TSETLIN^{V. M.}, KLIMENCHUK^{V. I.}, POZHARSKAYA^{Ye. B.},

"An Insecticide Composition"

USSR Author's Certificate No 288800, filed 13/05/69, published 17/03/72
(Translated from Referativnyy Zhurnal Khimiya, № 24(IL), 1972, Abstract No
24N593 P, by T. A. Balyayeva)

Translation: An insecticide is suggested, containing as its active ingredient a synergistic mixture of 0, 0-dimethyl 0-(2,2-dichlorovinyl) phosphate (I) and



an analog of the pyrethrins of the formula
(II). Results are presented from determination of the degree of synergism and
the insecticidal activity on houseflies. The composition of an aerosol can
include I, II, xylene, kerosene and a mixture of freons. The preparate is
nontoxic for warm blooded animals.
1/1

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USSR

UDC 632.95

BRIKMAN, L. I., TSETLIN, V. M., ROGINSKAYA, Ye. Ya., ZHUK, Ye. B., VOLKOVA,
A. P., VORONKINA, T. M., KLIMENCHUK, V. I., POZHARSKAYA, Ye. B.

"Compound for Controlling Household Insects"

USSR Author's Certificate No 340384, filed 15 Feb 71, published 23 Jun 72
(from RZH-Khimiya, No 2 (II), Feb 73, Abstract No 2N486)

Translation: The compound for controlling cockroaches, clones and moths
contains the following (in % by weight): γ -hexachlorcyclohexane 0.19%;
DDT 1.71%; DDVF 0.6%; xylol 5%; a mixture of CF_2Cl_2 (freon-12) and CFC_1_3
(freon-II) 55% and kerosene to 100%.

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"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1

UNCLASSIFIED
AND DOVF -U-
THOR-(05)-BESSONOV, I.V., VASHKOV, V.I., VOLKOV, YU.P., ZHUK, YA.B.,
TSETLIN, V.M.
COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL
39, NR 1, PP 78-80
DATE PUBLISHED-----70

OBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--INSECTICIDE, AEROSOL, TOXICITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/0358/70/039/001/0078/0080

ROXY REEL/FRAME--1987/0082

IRC ACCESSION NO--AP0103762

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1"

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1

NU--AP0103762
SUBL/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--18SEP70

ABSTRACT. INVESTIGATION OF THE ACTIVITY OF INSECTICIDE MIXTURES IN AEROSOL FORM AGAINST HOUSE FLIES EVALUATED BY THE COEFFICIENT OF COMBINED TOXICITY DEMONSTRATED MAXIMUM ACTIVITY IN MIXTURES WITH PIRETRINE TO DDVF RATIO OF 7:3 AND PIRETRINES AND DIMETRINE TAKEN IN 3:7. A TRIPLE MIXTURE BASED ON DDVF, PIRETRINES AND DIMETRINE TAKEN IN OPTIMAL PROPORTIONS (3:7:16) SHOWED GREATER EFFECTIVENESS THAN DOUBLE MIXTURES, PERMITTING TO REDUCE THE CONCENTRATION OF DDVF 7.77 FOLD, PIRETRINES 5.58 FOLD AND DIMETRINE 27.4 FOLD AS COMPARED WITH THE SAME DRUGS USED SEPARATELY.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1"

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1

CHARACTERISTICS -U

UNCLASSIFIED

PROCESSING DATE--11DEC70
CHARACTERISTICS AND AEROSOL COMPOSITION ON THE ATOMIZATION

AUTHOR-(CZ)-TSETLIN, V.N.

VASHKOV, V.I.

COUNTRY OF INFO--USSR

SOURCE--PARFUM., CCSMET., SAVONS 1970, 13(3), 189-94

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AEROSOL, PARTICAL SIZE, LIQUID PROPELLANT, FREON, CHEMICAL

COMPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO---FD70/605014/B08

STEP NO--FR/0000/70/013/003/0189/0194

CIRC ACCESSION NO--AP0140455

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1"

ACCESSION NO--AP0140455
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--110670

AV. DIAM. OF THE PARTICLES AND THE NO. OF CARBONS OF THE PROPELLANT IN THE MIXT., THE DEGREE OF POLYDISPERSION AND TEMP. OF THE MIXT., THE TEMP. AND THE ANGLE OF PROJECTION IN LEAVING THE BOMA., THE SATD. VAPOR PRESSURE AND THE COMPR. OF THE PRODUCT IN FILLING THE BOMBS. A TABLE IS GIVEN OF THE CHARACTERISTICS IN THE EXPANSION OF FREONS 11, 12, 114 AND C138. DELTA V (VOL.) AND WORK IN AN ISOTHERMAL PROCESS CAN BE CALCD. FROM THE EQUATIONS.

FACILITY: INST. RECH. DES INFEC., MOSCOW,

UNCLASSIFIED

TSETLIN, V.M.

JFRS 57517
15 NOV 72

- 31 -

Glass apparatus.

We investigated the sorption of ethylene oxide, methyl bromide and an O₂ mixture on the polymeric materials most commonly used in engineering: form plastic P-101, porous, plasticite M50, microporous rubber, polyamide-68, nitron and glass nitron.

The measurements were made by the volumetric method in a static

INVESTIGATION OF THE SORPTION AND DESORPTION OF GASES BY POLYMERS DURING THE PROCESS OF THEIR GAS STERILIZATION

[Article by L. B. Chudova, N. V. Kul'kova and V. M. Tsetlin. Moscow, Komičeskaja Vnukovskaja Poligrafija, Russian, Vol. 6, no. 3, December, October 1972, pp. 21-25. Submitted for publication 21 February 1972]

UDC 629.13.046.614.484:621.175

Abstract: Experiments were carried out to study the sorption and desorption of ethylene oxide, methyl bromide, and a mixture of the two on different polymeric materials: form plastic, porous, plasticite, microporous rubber, polyamide, nitron and glass nitron. Heats of sorption were compared for ethylene oxide and methyl bromide, and the specific surfaces of the materials were measured before and after gas sorption. Isotherms of ethylene oxide and methyl bromide sorption on plasticite and polyamide were constructed.

A gaseous mixture of ethylene oxide and methyl bromide, the mixture 0.0, whose ratio of components is 11.5, has been proposed for reducing the microbial occupation of different polymeric materials fabricated for use in sterilized pharmaceutical chambers. Polymeric materials absorb a considerable quantity of gases which later are released from the materials (Fisch, et al.; Sobier, et al.; Ackermann, et al.; A. A. Tager). Accordingly, the need has arisen for a quantitative determination of their absorption and elimination.

We investigated the sorption of ethylene oxide, methyl bromide and an O₂ mixture on the polymeric materials most commonly used in engineering: form plastic P-101, porous, plasticite M50, microporous rubber, polyamide-68, nitron and glass nitron.

The measurements were made by the volumetric method in a static

USSR

Aerosols

UDC 615.453.28.014.23.002.5

MAR'YASIN, B. YA., NAZHESTKIN, K. P., MARTYNTSEVA, M. N., and TSETLIN, Y. M.
All Union Scientific Research Institute of Medical Polymers, All Union Scientific
Research Institute of Disinfection and Sterilization, Moscow

"Investigation of Sprayers for Aerosol Cylinders"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 1, Jan 72, pp 39-42

Abstract: Nitrogen is often used as a propellant in forming aerosol preparations. To use it effectively, special atomizers are required as nitrogen is insoluble in most solvents and is being used only to propell the product out of the cylinders. The basic working unit in such atmoizers is a centrifugal sprayer with feeding channels. The centrifugal forces press the product against the walls of the sprayer producing a thin film which breaks down into fine droplets -- the aerosol particles. Data used for calculations of centrifugal sprayer parameters include liquid utilization per second, pressure, viscosity, and base angle of the jet. When a finely dispersed aerosol is required, the angle must be increased. Most calculations used in constructing the sprayers are assuming constant pressure which is not the case under real conditions, as the pressure in the cylinders drops continuously. The jet angle becomes smaller with a decrease in the pressure inside the cylinder; this effect

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MAR'YASIN, B. YA., et al., Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 1,
Jan 72, pp 39-42

is quite strong at pressures below 3 atm. The relationship between the length of the stream and the pressure is more complex: it decreases continuously as the pressure drops to 3-3.5 atm., then it begins to increase again. The diameters of the particles increase linearly, as the pressure is dropped. The crucial points occur at about 3 atm pressure, so the aerosol cylinders should be constructed in a way assuring a final pressure of 3 atm.

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- 3 -

1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--DETECTION OF ANTIBODY TO ONCOGENIC VIRUSES AND CERTAIN ADENOVIRUSES
IN GREEK MONKEY SERA -U
AUTHOR-(05)--DOODONOVA, N.N., OMELCHENKO, T.N., VASILYeva, N.N., TSETLIN,
YE.H., ALTSHEYN, A.D.
COUNTRY OF INFO--USSR

SOURCE--VOPROSY VIRUSLOGII, 1970, NR 3, PP 308-312
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ADENOVIRUS, MONKEY, ANTIBODY, ANTIGEN, HEMAGGLUTININ

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PRUXY REEL/FRAME--2000/1844

STEP NO--UR/0402/70/000/003/0308/0312

CIRC ACCESSION NO--AP0125455

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125455

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SERA OF HEALTHY GREEN MONKEYS FROM ANIMAL HOUSES OF THE MOSCOW INSTITUTES WERE TESTED FOR ANTIBODY TO SOME ONCOGENIC AND NON ONCOGENIC ADENOVIRUSES OF MONKEYS IN NEUTRALIZATION TEST, HI TEST AND CFT. NEUTRALIZING ANTIBODY TO HIGHLY ONCOGENIC ADENOVIRUSES SV20 AND SA7(C8) WAS FOUND IN 16PERCENT OF THE MONKEYS, AND FOR ADENOVIRUSES SA7(C626) AND SA7(B105) IN 2-4PERCENT OF THE MONKEYS. ANTIHEMAGGLUTININS FOR SV23(M2) AND SV32(M3) ADENOVIRUSES WERE FOUND IN 26-28PERCENT, AND FOR SV15(M4), SV37 AND SA7(B105) ADENOVIRUSES IN 10, 15 AND 6PERCENT OF MONKEYS, RESPECTIVELY. ONE MONKEY CAN POSSESS FIXING ANTIBODY FOR ADENO GROUP SPECIFIC ANTIGEN WAS FOUND IN 16PERCENT OF THE MONKEYS. THESE DATA INDICATE WIDESPREAD DISTRIBUTION OF ONCOGENIC AND NONONCOGENIC VIRUSES IN GREEN MONKEYS. FACILITY: GUSUDARSTVENNYY KONTROL'NYY INSTITUT MEDITSINSKIKH BIOLLOGICHESKIKH PREPARATOV IMENI L. A. TARASEVICHA, MOSKVA.

UNCLASSIFIED

UESR

UDC: 616-006.092.9-097.3

BABAKOVA, S.V., DODONOVA, N.N., TSEMLIN, YE.M., GORODILOVA, V.V., AGEYENKO, A.I., and AL'FSHTEYN, A.D., Laboratory of Virology Moscow Scientific Research Institute of Oncology imeni P. A. Herzen and Laboratory of Enterovirus and Adenovirus Preparations, State Control Institute of Medical Biological Preparations imeni L. A. Tarasevich.

"Induction of Specific Antitumor Immunity in Hamsters with Green Monkey Adenovirus SA7(C8)."

Leningrad, Voprosy Oncologii, Vol 16, No 3, 1970, pp 40-46.

Abstract: Strain SA7(C8) of green monkey adenovirus, highly oncogenic for hamsters, and its large-plaque and small-plaque variants, can induce specific antitumor immunity in adult hamsters. Large-plaque and small-plaque variants of virus SA7(C8) do not differ in their capacity to induce antitumor immunity. A high dose of virus SA7(C8), more than 10^5 TCD₅₀, is required to induce antitumor immunity. Immunity developed during the first week after inoculation of the virus. Cells of transplanted tumor lines regularly contain specific transplantation antigen. In cells of primary tumors induced by adenovirus SA7(C8), transplantation antigen could be found in only some cases.

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1/2 017

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--PREPARATION OF IMMUNE ASCITIC FLUIDS CONTAINING ANTIBODIES AGAINST
SALMONELLA ON RATS -U-

AUTHOR--(04)-BOGOYAVLENSKAYA, L.B., ALTSHTEYN, A.D., BOCHAROVA, N.G.,
TSETLIN, YE.M.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 5,
PP. 80-83

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SALMONELLA, ANTIBODY, WHITE RAT, IMMUNOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/0100

STEP NO--UR/0016/70/000/005/0080/0083

CIRC ACCESSION NO--AP0114496

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0114496
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS DEMONSTRATED THE POSSIBILITY OF OBTAINING ASCITIC FLUID FROM ALBINO RATS BY THE METHOD OF INTRAPERITONEAL INJECTION OF TUMOR CELLS OF OR STRAIN. FOR THE FIRST TIME THERE WERE OBTAINED IMMUNE ASCITIC FLUIDS CONTAINING ANTIBODIES TO VARIOUS SALMONELLA ANTIGENS. IT WAS SHOWN THAT REGULARITIES OF FORMATION OF ANTIBODIES IN RATS WERE IDENTICAL TO THESE REGULARITIES IN OTHER EXPERIMENTAL ANIMALS (RABBITS, SHEEP). IT IS RECOMMENDED TO USE ALBINO RAT AS A MODEL FOR IMMUNOLOGICAL EXPERIMENTS IN STUDYING SPECIFIC ANTIBODIES TO SALMONELLA. FACILITY: KONTROL'NYY INSTITUT MEDITSINSKIKH BIOLICHESKIKH PREPARATOV IM. TARASEVICA.

UNCLASSIFIED

Oncology

USSR

UDC 616.988.6.092.4

AL'TSHTEYN, A. D., ESETLIN, YE. M., DODONOVA, N. N., SARYCHEVA, O. F., LEVENBUK, I. S., and CHIGIRINSKIY, A. YE., State Control Institute of Biomedical Preparations imeni L. A. Tarasevich

"Tumor Formation in Cells Transformed in vitro by SV40 Virus"

Leningrad, Voprosy Onkologii, No 1, 1970, pp 63-69

Abstract: Mouse and rat embryonic cells transformed by SV40 virus did not form tumors in isologous animals, a phenomenon unrelated to the inability of these cells to produce tumors *in vivo*. Hamster embryonic and kidney cells readily induced continuous malignant growth *in vivo*. The fibroblast-like embryonic cells gave rise to sarcomas, while the kidney epithelioid cells induced carcinosarcomas and adenocarcinomas. The hamster tumor cells that developed after the inoculation of transformed hamster cells were readily passaged *in vivo* and *vitro*, where they retained the structure of the original cells. The immunofluorescence method revealed changes in the distribution of T-antigen after the transformed kidney cells were passaged in hamsters. There is a clear relationship between the sensitivity
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USSR

AL'TSHTEYN, A. D., et al., Leningrad, Voprosy Onkologii, No 1, 1970,
pp 63-69

of the hamster to the oncogenic action of SV40 virus and the ability
of the transformed cells of this species to induce tumors in iso-
or homologous animals.

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- 82 -

L/2 033

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--EPR SPECTRA OF SILICA GEL IRRADIATED IN A REACTOR AT LOW

TEMPERATURES -U-

AUTHOR--(03)-BERULAVA, S.G., NADIRASHVILI, L.SH., TSETSKHLADZE, T.V.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(2), 369-71

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SILICA GEL, RADIATION EFFECT, ELECTRON PARAMAGNETIC RESONANCE,
ETHYLENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1401

STEP NO--UR/0020/70/190/002/0369/0371

CIRC ACCESSION NO--AT0128800

UNCLASSIFIED

2/2 033

CIRC ACCESSION NO--AT0128800

UNCLASSIFIED

PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SILICA GEL (1) WAS IRRADIATED WITH GAMMA RADIATION FROM A NUCLEAR REACTOR AT 120DEGREESK WITH DOSES FROM 3 TO 60 MEGRADS. EPR SPECTRA WERE MEASURED AT 77DEGREESK AT X-BAND. I HAD A SPECIFIC AREA OF 600 M PRIME2-G. SAMPLES WERE EVACUATED 10 HR AT 300DEGREESK. SOME WERE THEN FILLED WITH C SUB2 H SUB6 AT 300 TORR. SPECTRA WERE RECORDED IMMEDIATELY AFTER IRRADN. AND SEVERAL DAYS LATER (STORED AT 77DEGREESK). WITH A 40 MEGRADS DOSE, THE SIGNALS FROM BOTH THE VACUUM TREATED AND THE C SUB2 H SUB6 FILLED SAMPLES WERE INHOMOGENEOUSLY BROADENED. THE SPECTRUM OF THE VACUUM TREATED SAMPLE HAD 3 COMPONENTS (POORLY RESOLVED) WITH G VALUES 2.00030, 2.0045, AND 2.0017, AND WITH CENTER LINE WIDTH 11.5 G. RESOLN. IMPROVES WITH A LOWER DOSE. THE C SUB2 H SUB6 CONTACTED SAMPLE HAS A SINGLE LINE, G EQUALS 2.0015, LINewidth EQUALS 2.3. THE H DOUBLET IS OBSD. WITH A EQUALS 504 G, LINewidth 3 G. AT 10 MEGRADS THE RADICAL YIELD FROM THE C SUB2 H SUB6 CONTACTED SAMPLE IS 0.05 THAT OF THE VACUUM TREATED. FOR THE C SUB2 H SUB6 CONTACTED SAMPLE, THE G EQUALS 2.0017 SIGNAL IS DUE TO AN ELECTRON IN AN O VACANCY, THAT AT 2.0080 TO A POS. HOLE. THE H ATOM SIGNAL IS SIMILAR TO 6PERCENT OF THE TOTAL RADICAL YIELD. THE G EQUALS 2.0080 AND 2.0045 LINES DISAPPEAR IN THE VACUUM TREATED SAMPLES, BUT NOT THE G EQUALS 2.0015 LINE.

FACILITY: INST. FIZ., TBILISI, USSR.

UNCLASSIFIED

USSR

Physical Properties

UDC:538.245

KALININ, V. M., DANILOV, M. A., KOMAROVA, L. K., TSEYTSIN, A. M., Sverdlovsk
Agricultural Institute
"Influence of Titanium on the Physical Properties of Iron-Nickel Invar
Alloys"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 36, No 2, 1973,
pp 310-315

Abstract: This work presents an experimental study of the influence of 0.72, 2.0, 2.6, 3.0 and 4.75 at.% Ti on I_s , T_c , resistivity ρ , magnetostriction λ_s , magnetostriiction susceptibility of the paraprocess $\delta\lambda_p/\delta H$, lattice parameter a , E and thermoelastic coefficient γ of iron-nickel alloys over a broad range of compositions (up to 60 wt.% Ni). It is shown that all properties change strongly upon addition of titanium. The results are explained on the basis of the theory of Sidorov and Doroshenko considering the valence of titanium and its ability to form $(Ni, Fe)_3Ti$ near order.

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USSR

UDC 669.1:548.53

KHOMENKO, O. A., TSEYTLIN, A. M., and KHIL'KEVICH, I. F., Ural Scientific Research Institute of Ferrous Metallurgy

"Effect of Recovery and Recrystallization on Young's Modulus and Its Temperature Function in Invar-Type Fe-Ni Alloys"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 35, No 2, Feb 73, pp 309-317

Abstract: The effect of plastic deformation and tempering (annealing) temperature on the modulus of elasticity and its components was studied for alloys N36T and N45T which do have a tendency to be precipitation hardened. The nickel content in these two alloys was 36.4 and 45.5% respectively. Along with the effect of plastic deformation, recovery, and recrystallization on the temperature function of magnetized and unmagnetized samples, the invar anomaly of elasticity and E-effect were also examined. Results of this study showed that in the deformed and low-tempered states the anomaly of the temperature function of Young's modulus is mainly determined by the invar effect of elasticity. The contribution of the E-effect and invar anomaly in $E(T)$ for alloy N36T is practically the same in the recrystallized state (annealed at 1100°C), while for alloy N45T the chief component is the E-effect. Stable elinvar properties are realized for specified compositions of invars with the 1/2

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KHOMENKO, O. A., et al., Fizika Metallov i Metallovedeniye, Vol 35, No 2,
Feb 73, pp 309-317

aid of deformation and incomplete annealing. 6 figures, 3 tables, 14
bibliographic references.

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USSR

UDC: 621.374.4.001.5

TSEYTLIN, M. B., BETSKIY, O. V., TSITSON', I. T.

"A Theoretical Study of the Multiplier Properties of a Magnetron Amplifier"

Moscow, Radiotekhnika i Elektronika, Vol 26, No 9, Sep 71, pp 1666-1672

Abstract: A system of strict nonlinear equations is derived to describe the behavior of the r-f field in a multistage frequency multiplier with crossed fields based on a traveling-wave magnetron. The resultant equations are used for analyzing various multiplier circuits (a two-stage multiplier with height-invariable interaction space, and with stepwise change of the interaction space, and a three-stage multiplier with intermediate buffer stage). Numerical calculations show that the amplitudes of the harmonics of the r-f current in a traveling-wave magnetron reach a maximum close to the point where the first electrons enter the decelerating system. These amplitudes then decrease continuously, reaching zero at the point corresponding to field saturation conditions. The space charge affects mainly the length required for

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USSR

TSEYTLIN, M. B., Radiotekhnika i Elektronika, No 9, 1971, pp 1666-1672

r-f current saturation, and has practically no effect on the maximum amplitudes of the harmonics of the r-f current (at least for small values of the space charge parameter). The results of the calculations also show that the higher time harmonics of the r-f current are fairly effective in the bunched electron beam of a traveling-wave magnetron. These results indicate that frequency multiplication should be quite effective in microwave devices with crossed fields. The authors thank I. V. Lebedev for discussions leading to this research.

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USSR

UDC: 621.385.6

TSEYTLIN, M. B., BETSKIY, O. V., and TSITSON', I. T.

"Investigating Type M Hybrid UHF Oscillators in High Amplitude Generation"

Kiev, Izvestiya VUZ SSSR--Radioelektronika, vol. 14, No. 3, 1971,
pp 235-242

Abstract: This paper analyzes the operation of two variants of two-section hybrid tubes (backward wave M-traveling wave K, backward wave M-backward wave M) in large amplitude generation on the basis of the nonlinear theory of beam devices with crossed fields. A detailed comparison of hybrid oscillators and the backward wave M-type tube as ordinarily used is given. The comparison indicates that the principal advantages of the hybrid type over the ordinary backward wave tube are: reduced starting and operating currents; the possibility of achieving higher efficiency (by about 15-25%) at lesser electrical lengths of the oscillator; the ability of frequency control with practically no expenditure of energy; complete absence of frequency pulling.

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USSR

UDC: 548.5

TSEYTLIN, M. N., PLAKHOV, G. F., LOBACHEV, A. N., POPOLOTOV, V. I.,
SIMONOV, M. A., and BELOV, N. V.

"Investigating Crystallization in the Hydrothermal System of
 $\text{GeO}_2\text{-Sb}_2\text{O}_3\text{-KF-H}_2\text{O}$ "

Moscow, Kristallografiya, vol 18, No 4, 1973, pp 836-839

Abstract: An investigation is conducted into the crystallization conditions in the $\text{GeO}_2\text{-Sb}_2\text{O}_3\text{-KF-H}_2\text{O}$ system by the hydrothermal method. The purpose of this investigation is two-fold: first, to fill in the gaps of knowledge concerning the interaction chemistry of germanium dioxide and antimony trioxide in the presence of a solution at high temperatures and pressures; second, to obtain all possible singlecrystals with no analogs in nature because of their potential value as objects of study with regard to structure and physical characteristics. The experiments were conducted with a charge consisting of GeO_2 and Sb_2O_3 copper lined autoclaves with periodic action. The results of the examination of the crystallization in the system are given individually for each temperature jump in the range of $400\text{-}550^\circ\text{C}$, the jumps being made in $20\text{-}45^\circ$ intervals. Photographs of the crystals are shown,
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USSR

UDC: 548.5

TSEYTLIN, M. N., et al, Kristallografiya, vol 18, No 4, 1973,
pp 836-839

and a table of interplanar distances for $Sb_2Ge_2O_7$ crystals is given.

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1/2 035

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--BEHAVIOR OF PLUTONIUM-239 IN RABBITS DURING THE INHALATION OF
AMMONIUM PENTACARBONATOPLUTONATE -U-

AUTHOR--(02)-TSEVELEVA, I.A., KRESLOV, V.V.

COUNTRY OF INFO--USSR

SOURCE--RADIOBIOLOGIYA 1970, 10(2), 307

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PLUTONIUM ISOTOPE, RABBIT, HALF LIFE, LUNG, BLOOD CHEMISTRY,
LIVER, BONE, RADIATION DOSAGE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO---FD70/605004/BII

STEP NO--UR/0205/70/010/002/0307/0307

CIRC ACCESSION NO--AP0139607

UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139607
ABSTRACT/EXTRACT--[U] GP-0- ABSTRACT. DISTRIBUTION AND KINETICS OF PRIME239 PU FOLLOWING A SINGLE INHALATION OF (NH SUB4) (SUB6 PU(CO SUB3) SUB5 (1.5 AND 5.0 MU CI) WAS STUDIED IN RABBITS OVER 2 YEARS. REMOVAL OF PRIME239 PU FROM THE LUNGS DID NOT DEPEND SIGNIFICANTLY ON THE AMT. OF RADIOSOPOKE ADMINISTERED AND WAS DESCRIBED WITH THE HELP OF 3 EFFECTIVE HALF LIVES (T SUBEFF): 61.5PERCENT WITH T SUBEFF EQUALS 3 DAYS, 35.2PERCENT WITH T SUBEFF EQUALS 35 DAYS, AND 2.7PERCENT WITH T SUBEFF EQUALS 174 DAYS. ABOUT 10-15PERCENT OF THE DOSE ADMINISTERED WAS REMOVED FROM THE LUNGS INTO THE BLOOD AND WAS THEN DEPOSITED IN APPROX. EQUAL AMTS. IN THE LIVER AND SKELETON. THE CONTENT OF PRIME239 PU DID NOT CHANGE IN THESE ORGANS SIGNIFICANTLY DURING 2 YEARS. THE ABSORBED DOSE OF RADIATION IN THE LUNGS, LIVER AND SKELETON, CALCO, FOR THE PERIOD OF 2 YEARS, WAS 3240, 490, AND 165 RADs, RESP.

FACILITY:

UNCLASSIFIED

USSR

UDC 577.4

KANDELAKI, N. P., TSEVTSVARZE, G. N.

"Convergence Rate of Asymptotically Optimal Series of Automata"

V. sb. Avtomaty, gibrnidn. i upravlyayushch. mashiny (Automata, Hybrid and Control Machines -- collection of works), Moscow, Nauka Press, 1972, pp 46-50
(from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V365)

Translation: The results are presented which are connected with determination of the rate of convergence of the states of asymptotically optimal automata to final probabilities: $L_{2n,2}$ designed by M. L. Tsetlin and $D_{2n,2}$ designed by V. I. Krinskiy.

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SSSR

UDC 616.61-002.151

GRINSHPUN, O. Ya., Col Med Serv, Candidate of Medical Sciences;
VAS'KOV, V. G., Lt Col Med Serv; MAKSIMOV, Ye. V., Lt Col Med
Serv; ANDRONOV, A. S., Capt Med Serv; MARAKUSHEV, M. I.;
KHOMENKO, L. M.; TSEV, A. L.

"Some Clinical Data on Hemorrhagic Nephrosonephritis"

Moscow, Voyenno-Meditsinskiy Zhurnal, No 8, Sep 71, pp 50-51

Abstract: Observation of 17 cases of hemorrhagic nephrosonephritis (HNN) sporadically occurring in the Transcarpathian Region revealed a typical progress of this disease through three stages. In the first stage, lasting 2-4 days, body temperature rapidly rose to 38-40°C, the patients complained about headache, pain in muscles and joints, and general weakness; they were photophobic, had cutaneous hyperemia in the face and upper trunk, and some developed dry noises in their lungs. An incorrect diagnosis was made in all cases, partly because this disease is very rare in Transcarpathia. In the second stage, lasting 4-8 days, clinical signs characteristic of HNN developed

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GRINSHPUN, O. Ya., et al, Voyenno-Meditsinskiy Zhurnal, No 8,
Sep 71, pp 50-51

in all patients, and the proper diagnosis was established in all. Only four patients had hemorrhagic conjunctiva or nosebleed. All suffered from gastrointestinal disorders and from oliguria (down to 200 ml per day) with hematuria and proteinuria. The third stage -- convalescence -- began on the 9th - 11th day with the onset of diuresis, which soon reached 6-8 liters per day. Hemorrhages, vomiting, fever, and other discomfort subsided, and the patients regained appetite and thirst. In the initial days of polyuria, concentration of gamma globulins in the protein fraction increased to 27.9%, while plasma potassium decreased to 9.3 mg% and plasma calcium to 6.8 mg%. The patients lost 5-8 kg body weight. The stage of convalescence lasted 2-3 weeks. The treatment was symptomatic, and all patients recovered without complications.

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USSR

UDC 669.243+669.337:669.052

TSEYDLER, A. A.

"Production of Copper and Nickel From Complex Sulfide Raw Material"

Moscow, Tsvetnyye Metally, No 2, Feb 71, pp 11-12

Translation: The author discusses a new technological diagram of complex processing of sulfide copper-nickel ores, proposed in an article by N. P. Mash'yanov, et al., Tsvetnyye Metally, No 10, Nov 70.

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USSR

UDC 669.71.053.24(088.8)

KHITRIK, S. I., GASIK, M. I., VUKOLOV, YE. A., GLIENKOVICH, N. A.,
PORADA, A. N., LAGUNOV, YU. V., POLONSKIY, S. M., IORDANOVA,
Z. A., MALYSHEV, V. I., YEMLIN, B. I., KASHKUL', V. V., MASHKOV,
V. P. ~~TSEVMAKH, N. L.~~, YEM, A. P., CHERNYSH, F. I., and KOLNOGU-
ZENKO, V. A., Dnepropetrovsk Metallurgical Institute

"Method of Smelting Abrasive Electrolytically Produced Corundum"

USSR Author's Certificate No 263635, filed 15 Oct 65, published
10 Jun 70 (from RZh-Metallurgiya, No 11, Nov 70, Abstract No 11
G101 P)

Translation: A method is proposed for smelting abrasive electrolytically produced corundum in a thermal furnace which involves deep fusion of alumina-containing charge with reducing agents. To increase the abrasive properties of corundum and to obtain in it a Ti oxide content of < 1%, smelting is carried out on kaolin presintered with Fe-ore additive or scale in the amount of 20-30 wt % of the charge.

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USSR

UDC 51.01;519.5

ZASLAVSKIY, I. D., and TSEYTIN, G. S., Computer Center of the Academy of Sciences Armenian SSR and Yerevan State University, Computer Center of Leningrad State University.

"Rectifiability Criterion for Constructive Plane Curves"

Yerevan, Izvestiya Akademii Nauk Armyanskoy SSR, Seriya Matematika, Vol 5, No 5, 1970, pp 434-440

Abstract: A previous article by I. D. ZASLAVSKIY showed that constructive rectifiability of a constructive curve requires that both its components be functions of constructively bounded variation, but this condition is not sufficient for constructive rectifiability of a curve. During a report on these findings at a Moscow State University seminar A. A. MARKOV suggested that for the rectifiability of a constructive curve it is necessary and sufficient that the components of all curves congruent to it be functions of bounded variation. The present article gives the proof for MARKOV's theory. The following theorem is proved: Constructive curve K , given on $\alpha \wedge \beta$, is constructive.

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ZASLAVSKIY, I. D., and TSEYTIN, G. S., Izvestiya Akademii Nauk Armyanskoy SSR, Seriya Matematika, Vol 5, No 5, 1970, pp 434-440
ly rectifiable if and only if any linear combination of its components is a function of constructively bounded variation; in this case the length on curve K equals

$$\frac{1}{2} \cdot \int_0^{\pi} \left| \sqrt{1 + (K^1(t) \cdot \cos \varphi + K^2(t) \cdot \sin \varphi)^2} \right| d\varphi.$$

It is noted that the above formula may also be proved within the limits of classical analysis, although the authors have not encountered such a formula in the literature on classical analysis.

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1/2 022
TITLE--PHOTOLUMINESCENCE OF ANODIC OXIDE FILMS ON ALUMINUM -U-
PROCESSING DATE--20NOV70

AUTHOR--(02)--EYDELBERG, M. I., TSEYTINA, T. Z.

CCOUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., FIZ. 1970, 13(2), 133-5

DATE PUBLISHED--70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--PHOTOLUMINESCENCE, LUMINESCENCE, ANODIZED ALUMINUM ALLOY,
ANODIC OXIDATION, OXIDE FILM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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STEP NO--UR/0139/70/013/002/0133/0135

CIRC ACCESSION NO--A0120190

UNCLASSIFIED

2/2 022

CIRC ACCESSICK NO--AT0120190
ABSTRACT/EXTRACT--(U) GP-0- UNCLASSIFIED
ABSTRACT. RESULTS OF INVESTIGATION OF THE
RELATION OF PHOTOLUMINESCENCE OF ANODIC OXIDE FILMS ON AL TO THE REGIME
OF FORMING AND ANNEALING TEMP. ARE REPORTED. IT WAS OBSD. THAT A WEAL
SHIFT TOWARD LONGWAVES OCCURS WITH INCREASING FORMATION TIME. THE
POSITION OF THE STRONGEST PART OF THE SPECTRUM AND THE BRIGHTNESS OF
LUMINESCENCE OF ANODIC OXIDE FILMS FORMED IN OXALIC ACID DEPNDN ON
THICKNESS AND POROSITY OF FILMS. THE ANNEALING OF OXIDE FILMS OBTAINED
BY FORMING IN D.C. STIMULATES THE CONCN. OF LUMINESCENT CENTERS OF THE
GOSPEDINST. IM. FRUNZE, SIMFEROPOL, USSR.
PROCESSING DATE--20NOV70
FACILITY: KRYM.

UNCLASSIFIED

USSR

UDC: 639.3.534.1

TRAVUSH, V. I., TSEYTLIN, A. I.

"Inverse Problem of the Theory of Oscillations for a Circular Plate on an Elastic Base"

Tr. TsNII stroit. konstruktsiy (Works of the Central Scientific Research Institute of Construction Elements), 1971, vyp. 17, pp 16-25 (from RZh-Mekhanika, No 7, Jul 72, Abstract No 7V179)

Translation: The authors determine the function $q(r, \theta)$ which is a variable bedding coefficient in the known equation of motion accompanying deformations of a thin elastic plate

$$D\Delta\Delta W_t(r, \theta, t) + m \frac{\partial^2}{\partial t^2} W(r, \theta, t) + q(r, \theta) W_t(r, \theta, t) = 0$$

where D and m are respectively the cylindrical rigidity and the running density of the plate; Δ is the Laplace operator in polar coordinates; W is flexure; t is time. The boundary conditions correspond to the general case of elastic fastening. The quantities $q(r, \theta)$ and $W(r, \theta)$ are expanded in Fourier series with respect to the angular coordinate,

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TRAVUSH, V. I., TSEYTLIN, A. I., Tr. TsNIT stroit. konstruktsiy, 1971,
vyp. 17, pp. 16-25

and the ordinary differential equation for the Fourier component

$$\left[\left(\frac{\partial^2}{\partial r^2} + \frac{1}{r} \frac{\partial}{\partial r} - \frac{n^2}{r^2} \right)^2 + q_n(r) - \lambda^2 \right] \varphi_n(r) = 0$$

is then found. Then, as the authors confirm, a Fredholm's integral
equation of the second kind is obtained which can be used to determine
 $q_n(r)$. Yu. K. Konenkov.

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USSR

UDC 8.74

VARSANOVICH, S. A., TSEYTLIN, A. I.

"Set of Programs for Dynamic Calculation of Construction Parts on the Mir Computer"

V sb. Mashiny dlya inzh. raschetov. Vyp. 5 (Machines for Engineering Calculations. Vyp. 5 — collection of works), Kiev, 1972, pp 101-134 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V650)

No abstract

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USSR

UDC 621.3/3.42.54:621.385.6(088.8)

GINZBURG-PRESNOV, V. S., DEVYATKIN, I. I., ZUSMANOVSKIY, A. S., TSEYTLIN, A. M.

"Superhigh Frequency Magnetron Generator"

USSR Author's Certificate No 251016, Filed 23 May 67, Published 5 Nov 70
(from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9D2952)

Translation: In order to improve the reliability of a superhigh frequency magnetron generator (see RZh-Radiotekhnika, 1968, 4D366), it is proposed that the primary winding of the heater transformer of the first magnetron be connected in series to the primary winding of the heater transformer of the second magnetron.

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"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1

UCL
TITLE—RADIATION GRAFTING OF ACRYLIC ACID AND STYRENE FROM THEIR VAPOR
MIXTURES ON A POLYPROPYLENE FIBER -U-
AUTHOR—(03)—GULUBEV, V.N., KORSHAK, V.V., TSETLIN, B.L.

COUNTRY OF INFO—USSR

SOURCE—DOKL. AKAD. NAUK SSSR 1970, 190(4), 846-8
DATE PUBLISHED—70

SUBJECT AREAS—CHEMISTRY, MATERIALS

TOPIC TAGS—ACRYLIC ACID, STYRENE, POLYPROPYLENE FIBER, PEROXIDE,
COPOLYMERIZATION, RADIATION GRAFT POLYMERIZATION

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED

PROXY REEL/FRAME—1992/2011

CIRC ACCESSION NU—AT0112966

STEP NO—UR/0020/70/190/004/0846/0848

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APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R002203330007-1"

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UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AT0112966
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADSORPTION OF STYRENE (I) AND
ACRYLIC ACID (II) VAPORS ON POLYPROPYLENE FIBERS (III) PROCEEDS AT
APPROX. THE SAME RATES. THE REACTIVITY RATIOS OF I-II COPOLYMN.,
INITIATED WITH PEROXIDES, ARE 0.25 FOR I AND 0.45 FOR II (G. ODIAN, ET
AL., 1962). IN RADIATION GRAFTING OF I-II VAPUR MIXTS. ON III, THE
REACTIVITY RATIOS OF I AND II ARE 0.29 AND 0.43 RESP., INDICATING THAT
III ACTS AS A SUPPORT FOR THE FREE RADICAL COPOLYMN. OF I WITH II. THE
COPOLYMER IS SUBSEQUENTLY GRAFTED ONTO III (A. V. VLASOV, ET AL., 1966).
FACILITY: INST. ELEMENTOORG SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 577.4

KEKELIYA, V. I., TSEYTLIN, G. Ye.

"Concerning Realization of Multiple-Register Periodically Defined Transformations in an Abstract Model of a Computer Medium"

V sb. Vychisl. sistemy (Computer Systems--collection of works), vyp. 47, Novosibirsk, 1971, pp 87-102 (from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V428)

Translation: The paper deals with development of methods of realizing multiple-register transformations in one abstract model of a computer medium. Microprograms of basic arithmetic operations are described. [From the introduction].

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